WHAT IS CLAIMED AS NEW AND DESIRED TO BE SECURED BY LETTER OF PATENT OF THE UNITED STATES OF AMERICA IS:

- 1. A process for the aromatization of hydrocarbons comprising:
- a) contacting an alkane containing 2 to 6 carbon atoms per molecule with at least one catalyst containing a gallium zeolite on which platinum has been deposited; and
- b) recovering the aromatic product.
- 2. The process of claim 1 wherein the silicon to gallium atomic ratio (Si/Ga) is greater than 5.
- 3. The process of claim 2 wherein the silicon to gallium atomic ratio in the range of from 5-400.
- 4. The process of claim wherein the silicon to gallium atomic ratio in the range of from 25-250.
- 5. The process of claim 1 wherein platinum is present in the range of from 0.05% to 3%.
- 6. The process of claim 5 wherein platinum is present in the range of from 0.2% to 2%.

- 7. The process of claim 6 wherein platinum is present in the range of from 0.2% to 1.5%.
- 8. The process of claim 1 wherein the contact between the alkane and the catalyst is at a space velocity in the range between 0.1 and $100\ h^{-1}$.
- 9. The process of claim 8 wherein the contact between the alkane and the catalyst is at a temperature in the range between 200 and 600°C.
- 10. The process of claim 9 wherein the contact between the alkane and the catalyst is at a pressure in the range between 5 and 215 psia.
- 11. The process of claim 1 wherein the zeolite has a MFI, FAU, TON, MFL, VPI, MEL, AEL, AFI, MWW or MOR structure.
- 12. The process of claim 11 wherein the zeolite has a MFI structure.
- 13. The process of claim 12 wherein the zeolite has a ZSM-5 MFI structure.

14. The process of Claim 1 wherein the sodium form of the zeolite catalyst is represented as:

$$|\operatorname{Na_x} \cdot (\operatorname{H_2O})_z| [\operatorname{Ga_xSi_yO_{2y+3x/2}}] - \mathbf{MFI}$$

where x=0.1-25; y=60-100; and z=0.1-10.

- 15. A process for synthesizing a platinum-gallium zeolite catalyst comprising:
- a) preparing a gallium zeolite containing silicon and gallium;
- b) depositing platinum on the zeolite; and
- c) calcining the zeolite.
- 16. The process of claim 15 wherein the platinum is deposited by cationic exchange.
- 17. The process of claim 15 wherein the platinum is deposited by impregnation.
- 18. The process of claim 15 wherein the zeolite has an MFI, FAU, TON, MFL, VPI, MEL, AEL, AFI, MWW or MOR structure.
- 19. The process of claim 18 wherein the zeolite has a MFI structure.

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- 20. The process of claim 19 wherein the zeolite has a ZSM-5 MFI structure.
- 21. The process of claim 15 wherein the catalyst is subsequently treated first with hydrogen, second with a sulfur compound; and then again with hydrogen.
- 22. A platinum gallium zeolite catalyst for aromatization of hydrocarbons comprising:
- a) a gallium-silicon zeolite; and
- b) platinum deposited on the gallium-silicon zeolite.
- 23. The catalyst of claim 22 wherein the silicon to gallium atomic ratio is greater than 5.
- 24. The catalyst of claim 23 wherein the silicon to gallium atomic ratio in the range of from 5-400.
- 25. The catalyst of claim 24 wherein the silicon to gallium atomic ratio in the range of from 25-250.
- 26. The catalyst of claim 22 wherein platinum is present in the range of from 0.05% to 3%.

- 27. The catalyst of claim 26 wherein platinum is present in the range of from 0.2% to 2%.
- 28. The catalyst of claim 27 wherein platinum is present in the range of from 0.2% to 1.5%.
- 29. The catalyst of claim 22 wherein the pore size of the zeolite is in the range from 2 to 200 angstroms.
- 30. The catalyst of claim 29 wherein the pore size of the zeolite is in the range from 2 to 100 angstroms.
- 31. The catalyst of claim 30 wherein the pore size of the zeolite is in the range from 2 to 20 angstroms.
- 32. The catalyst of claim 22 wherein the zeolite has a MFI, FAU, TON, MFL, VPI, MEL, AEL, AFI, MWW or MOR structure.
- 33. The catalyst of claim 22 wherein the zeolite has a MFI structure.
- 34. The catalyst of claim 22 wherein the zeolite has a ZSM-5 MFI structure.

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35. The catalyst of claim 22 wherein the catalyst is represented by the formula

$$|Na_x \cdot (H_2O)_z| [Ga_xSi_yO_{2y+3x/2}] - MFI$$

where x=0.1-25; y=60-100; and z=0.1-10.

36. The catalyst of claim 22 wherein its X-ray diffraction pattern has peaks at 11.19, 9.98, 9.77, 6.37, 5.99, 3.86, 3.82, 3.76, 3.72 and 3.65 angstroms.